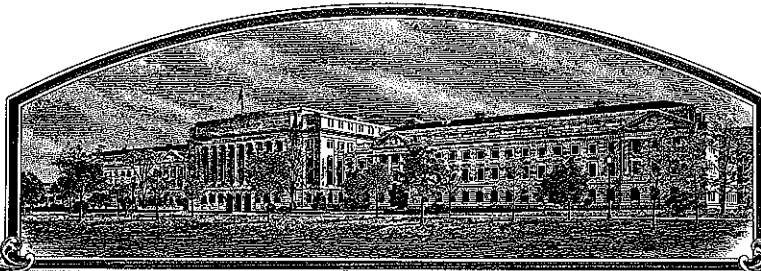


No.

200000214



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Rijk Zwaan Zaadteelt en Zaadhandel B.V.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

LETTUCE

'Adal'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this nineteenth day of September, in the year two thousand and five.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

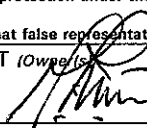


U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a).

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421) Information is held confidential until certificate is issued (7 U.S.C. 2426).

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate) Rijk Zwaan Zaadteelt en Zaadhandel B.V.		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME ADAL
4. ADDRESS (Street and No., or R.F.D. No., City, State and ZIP Code, and Country) Burgemeester Crezeelaan 40 2678 KX DE LIER, The Netherlands		5. TELEPHONE (include area code) + 31 174 532300	FOR OFFICIAL USE ONLY PVPO NUMBER 200000214 DATE May 1, 2000
		6. FAX (include area code) + 31 174 513730	
7. GENUS AND SPECIES NAME <i>Lactuca sativa</i> L.	8. FAMILY NAME (Botanical) Compositae		FILING AND EXAMINATION FEE \$ 2450.00
9. CROP KIND NAME (Common name) Lettuce			DATE May 1, 2000
10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc. (Common name) Rijk Zwaan Zaadteelt en Zaadhandel B.V. Corporation			CERTIFICATION FEE \$ 682.00
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Corporation		12. DATE OF INCORPORATION The Netherlands 08-18-1953	DATE August 15, 2005
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVES, IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS			14. TELEPHONE (include area code)
			15. FAX (include area code)
16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)			
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety			
b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness			
c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of the Variety			
d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety			
e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Applicant's Ownership			
f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in a public repository)			
g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,450) made payable to the "Treasurer of the United States" (Mail to PVPO)			
17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED (See Section 83(a) of the Plant Variety Protection Act)? <input type="checkbox"/> YES (If "yes", answer items 18 and 19 below) <input checked="" type="checkbox"/> NO (If "no", go to item 20)			
18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO		19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES (If "yes", give names of countries and dates) <input type="checkbox"/> NO Adal has been sold for the first time in Spain in August 1997. Adal has not yet been sold in the U.S.A.			
21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF APPLICANT (Owner(s)) 		SIGNATURE OF APPLICANT (Owner(s))	
NAME (Please print or type) M. Zwaan		NAME (Please print or type)	
CAPACITY OR TITLE Managing Director	DATE 18 April 2000	CAPACITY OR TITLE	DATE

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed Exhibits A, B, C, E; (3) at least 2,500 viable untreated seeds, or for tuber reproduced varieties verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in a public repository prior to issuance of a certificate; (4) check drawn on a U.S. bank for \$ 2,450 (\$ 300 filing and \$2,150 examination fee), payable to "Treasurer of the United States" (*See Section 97.175 of the Regulations and Rules of Practice.*) partial applications will be held in the PVPO for no more than 30 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Blvd., Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$300 for issuance of the Certificate.

Plant Variety Protection Office
Telephone: (301) 504-5518

ITEM

- 16a. Give: (1) the genealogy, include public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified.
- 16b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences;
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 16c. Exhibit C forms are available from the PVPO for most crops; specify crop kind, Fill in Exhibit C (Objective Description of the Variety) form as completely as possible to describe your variety.
- 16d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 16e. Section 52(4) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. The applicant may be the actual breeder, the employee of the breeder, the owner through purchase of inheritance, etc.
17. If "yes" is specified (*seed of this variety be sold by a variety name only, as a class of certified seed*), the applicant may NOT reverse this affirmative decision after the variety has been sold and so labelled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (*See P.L. 103-349 for additional information.*)
20. See Sections 41, 42, and 43 of the Act and Section 97.175 of the regulations for eligibility requirements.

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment is specified in Section 97.175 of the regulations. (*See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of Regulations and Rules of Practice.*)

To avoid conflict with other variety names in use, the applicant should check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center—East, Beltsville, MD 20705. Telephone: (301) 504-8089.

44-70 1-AMM CO.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Officer, OIRM, AG Box 7630, Washington, DC 20250; and to the Office of Management and Budget, Paperwork Reduction Project (OMB No. 0581-0055), Washington, DC 20503.



EXHIBIT A. ORIGIN AND BREEDING HISTORY OF THE VARIETY

VARIETY: ADAL

Genealogy/Details of stages of selection and multiplication:

The development of Adal started with a selected F3-plant (male parent) from a cross between Fortessa (female parent; Van de Berg, The Netherlands) and Avoncrisp (male parent; HRI, Wellesbourne, UK) in 1981. This plant was used as male parent in a cross with Saladin (syn. Salinas, USDA, USA) in 1984. The resulting F1 was crossed with Vanguard-75 (USDA, USA) as female parent in 1985. A combined line and pedigree selection resulted in 1994 in a uniform F10-line based on one F9-plant. All crossing and breeding was performed in the Netherlands.

Selection was based on:

1. Field evaluation:

- Homogeneity
- Plant size
- Head size
- Head firmness
- Head weight
- Tipburn resistance
- Bolting resistance

2. Laboratory tests on downy mildew and root aphid resistance, and LMV and CMV tolerance

Statement of uniformity and stability

Adal was stable and uniform in variety tests and in seed multiplications carried out since 1995. Official tests of NAKTuinbouw (EC Variety List) and Plant Research International (Community Plant Variety Right) confirmed the uniformity and stability of Adal.

In seed multiplications we are finding about 0.4% of off-types,. These off-types are big 'wild' plants that do not make a head.

Variants

JRM
5/27/05

Variants

JRM
5/27/05

The number of generations over which uniformity and stability has been observed is: ~~22~~ Uniformity and stability have been shown since 1995.

Exhibit B

Adal is most similar to ~~Salinas 88~~

root aphid resistance - Adal contains the Ra-gene, which is closely linked to the Dm6-gene, and providing complete resistance to the lettuce root aphid *Pemphigus bursarius*. This monogenic root aphid resistance was first described by Dunn (Report of the National Vegetable Research Station for 1967, pp.73-74. 1968). Further details about this monogenic resistance gene are presented by Ellis et al. (Ann.appl.Biol. 124, 141-151. 1994). This gene is absent in comparison varieties Salinas 88, Fiorette, Vetonas, Fortunas, and Toronto.

Trial 1

location: Hendrik-Ido-Ambacht, the Netherlands

sowing: 17-03-1998

planting: 27-04-1998

harvest: 22-06-1998

variety: Fortunas(n=10) Salinas 88(n=10) Vetonas(n=10)

Adal(n=10)

days to bolting: 152.7(sd=1.2) 159.1(sd=1.0) 159.6(sd=0.8)

163.0(sd=1.3)

variety: Fiorette (n=10) Adal(n=10)

color (RHS-color chart) 146C 146A

Trial 2

location: Roelofarendsveen, the Netherlands

sowing: 19-03-1999

planting: 20-04-1999

harvest: 16-06-1999

variety: Fortunas(n=10) Salinas 88(n=10) Vetonas(n=10)

Adal(n=10)

days to bolting: 141.3(sd=1.5) 147.1(sd=1.0) 146.4(sd=1.0)

151.1(sd=1.8)

variety: Fiorette (n=10) Adal(n=10)

color (RHS-color chart) 146C 146A

F-tests based on analysis of variance across both locations show that Adal is significantly different from Fortunas for days to bolting ($F=634$; $p<0.001$). F-tests based on analysis of variance across both locations show that Adal is significantly different from Salinas 88 for days to bolting ($F=819$; $p<0.001$). F-tests based on analysis of variance across both locations show that Adal is significantly different from Vetonas for days to bolting ($F=950$; $p<0.001$).



EXHIBIT B. STATEMENT OF DISTINCTNESS

VARIETY: ADAL

Identify the varieties and state all differences objectively:

Adal is a slow bolting crisp lettuce with root aphid resistance. Adal is resistant to the official Bremia races NL1, NL2, NL4, NL5, NL6, NL13, NL14, NL15, BI-17 and BI-19.

Difference from other lettuce varieties from the database:

Denomination of parent variety	Characteristic in which the similar variety is different	State of expression of similar variety	State of expression of candidate variety
Salinas 88, Fiorette, Vetonas, Fortunas, Toronto	root aphid resistance (<i>Pemphigus bursarius</i>)	susceptible	resistant
Salinas 88 Vetonas, Fortunas	downy mildew resistance (<i>Bremia lactucae</i>)	resistant to NL1, NL2, NL5, NL6, NL7, NL14, BI-19	resistant to NL1, NL2, NL4, NL5, NL6, NL13, NL14, NL15, BI-17, BI-19
Fiorette, Toronto	downy mildew resistance (<i>Bremia lactucae</i>)	resistant to NL1, NL2, NL3, NL4, NL5, NL6, NL7, NL10, NL11, NL12 NL13, NL14, NL15, NL16, BI-19, BI-21	resistant to NL1, NL2, NL4, NL5, NL6, NL13, NL14, NL15, BI-17, BI-19
Vetonas, Fortunas	lettuce aphid resistance (<i>Nasonovia ribisnigri</i>)	resistant	susceptible
Salinas 88, Vetonas, Fortunas	bolting resistance	faster bolting	slower bolting
Fiorette	leaf dentation	2 shallowly dentate	4 crenate
Fiorette	leaf colour intensity	6 medium to dark	7 dark
Fiorette	LMV-resistance	resistant	susceptible

U.S. Department of Agriculture
Agricultural Marketing Service
Livestock and Seed Division
OBJECTIVE DESCRIPTION OF VARIETY
LETTUCE *Lactuca sativa*

EXHIBIT C

NAME OF APPLICANT(S) Rijk Zwaan Zaadteelt en Zaadhandel B.V.	FOR OFFICIAL USE ONLY PVPO NUMBER 200000214
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP-Code) Burgemeester Crezeelaan 40 2678 KX DE LIER The Netherlands	VARIETY NAME ADAL EXPERIMENTAL DESIGNATION

Place numbers in the boxes for the characters which best describe this variety. Measured data should be the mean of an appropriate number (at least 10) of well spaced plants. Royal Horticultural Society or any recognized color standard may be used to determine plant colors.

The location of the test area is: The Netherlands	Color System Used: RHS
--	---------------------------

1. PLANT TYPE: (See list of suggested check varieties page 4.)

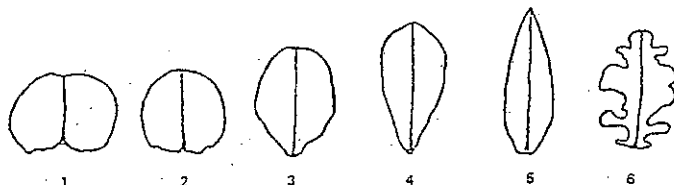
0	6	01 = Cutting/Leaf	05 = Great Lakes Group	09 = Stem
		02 = Butterhead	06 = Vanguard Group	10 = Latin
		03 = Bibb	07 = Imperial Group	11 = OTHER:
		04 = Cos or Romaine	08 = Eastern (Ithaca) Group	

2. SEED: COLOR	LIGHT DORMANCY	HEAT DORMANCY
1 = White(Silver Gray)	1 = Light Required	1 = Susceptible
2 = Black (Gray Brown)	2 = Light not required	2 = Not susceptible
3 = Brown(Amber)		

3. COTYLEDON TO FOURTH LEAF STAGE: NOTE: Provide a color photograph or photocopy of the fourth leaf from 20 day old seedling grown under optimal conditions

3	SHAPE OF COTYLEDONS: 1 = Broad 2 = Intermediate 3 = Spatulate
---	---

3	SHAPE OF FOURTH LEAF:
---	-----------------------



1	6	LENGTH/WIDTH INDEX OF FOURTH LEAF: L/W x 10
---	---	---

3	APICAL MARGIN:	1 = Entire	4 = Moderately Dense	7 = Lobed
4	BASAL MARGIN:	2 = Creanate/Gnawed	5 = Coarsely Dentate	8 = OTHER (specify)
		3 = Finely Dentate	6 = Incised	

2	UNDULATION:	1 = Flat	2 = Slight	3 = Medium	4 = Marked
---	-------------	----------	------------	------------	------------

4	GREEN COLOR:	1 = Yellow Green	3 = Medium Green	5 = Blue Green	7 = Gray Green
		2 = Light Green	4 = Dark Green	6 = Silver Green	

ANTHOCYANIN:				
1	DISTRIBUTION:	1 = Absent	3 = Spotted	5 = OTHER (specify)
		2 = Margin Only	4 = Throughout	

[]	CONCENTRATION:	1 = Light	2 = Moderate	3 = Intense
-----	----------------	-----------	--------------	-------------

2	ROLLING:	1 = Absent	2 = Present
---	----------	------------	-------------

2	CUPPING:	1 = Uncupped	2 = Slight	3 = Markedly
---	----------	--------------	------------	--------------

3	REFLEXING:	1 = None	2 = Apical margin	3 = Lateral Margin
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4. MATURE LEAVES (observe harvest-mature outer leaves):

NOTE: Provide color photo of harvest-mature leaves which accurately shows color and margin characteristics.

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2	INCISION DEPTH: (deepest penetration of the margin)	1 = Absent/Shallow (Dark Green Boston)	2 = Moderate (Vanguard)	3 = Deep (Great Lakes 659)
4	INDENTATION: (finest divisions of the margin)	1 = Entire (Dark Green Boston)	3 = Deeply Dentate (Great Lakes 659)	5 = OTHER (specify)
		2 = Shallowly Dentate (Great Lakes 65)	4 = Crenate (Vanguard)	
2	UNDULATION OF THE APICAL MARGIN:	1 = Absent/Slight (Dark Green Boston)	2 = Moderate (Vanguard)	3 = Strong (Great Lakes 659)
3	GREEN COLOR:	1 = Very Light Green (Bibb)	3 = Medium Green (Great Lakes)	5 = Very Dark Green
		2 = Light Green (Minetto)	4 = Dark Green (Vanguard)	6 = OTHER
1	ANTHOCYANIN (grown at or below 10 °C):			
	DISTRIBUTION:	1 = Absent	3 = Spotted (Calif. Cream Butter)	5 = OTHER (specify)
		2 = Margin Only (Big Boston)	4 = Throughout (Prize Head)	
	CONCENTRATION:	1 = Light (Iceberg)	2 = Moderate (Prize Head)	3 = Intense (Ruby)
3	SIZE:	1 = Small	2 = Medium	3 = Large
1	GLOSSINESS:	1 = Dull (Vanguard)	2 = Moderate (Salinas)	3 = Glossy (Great Lakes)
2	BLISTERING:	1 = Absent/Slight (Salinas)	2 = Moderate (Vanguard)	3 = Strong (Prize Head)
3	LEAF THICKNESS:	1 = Thin	2 = Intermediate	3 = Thick
1	TRICHOMES:	1 = Absent (smooth)	2 = Present (spiny)	

5. PLANT (at market stage. Choose a comparison variety appropriate for this type):

3	7	SPREAD OF FRAME LEAVES:	3	8	cm. Salinas (specify comparison variety)
1	4	HEAD DIAMETER (market trimmed with single cap leaf):	1	5	cm. Salinas (specify comparison variety)
		cm. This variety			
2		HEAD SHAPE:	1 = Flattened	3 = Spherical	5 = Non-heading
			2 = Slightly Flattened	5 = Elongate	6 = OTHER
2		HEAD SIZE CLASS:	1 = Small	2 = Medium	3 = Large
		HEAD COUNT PER CARTON			
	7	5	9	HEAD WEIGHT:	
				g This Variety	8 6 5 g. Salinas (specify comparison variety)
4		HEAD FIRMNESS	1 = Loose	3 = Firm	
			2 = Moderate	4 = Very Firm	

6. BUTT (bottom of market-trimmed head):

3	SHAPE:	1 = Slightly Concave	2 = Flat	3 = Rounded
3	MIDRIB:	1 = Flattened (Salinas)	2 = Moderately Raised	3 = Prominently Raised (Great Lakes 659)

7. CORE (stem of market-trimmed head):

2	7	mm Diameter at base of Head
	5	2 Ratio of head diameter/core diameter
3	2	Core height from base of head to apex:
		mm. This Variety
	3	9 mm. Salinas (specify comparison variety)

8. BOLTING (Give First Water Date) 03/19/1999 : Note: First Water Date is the date seed first receives adequate moisture to germinate. This can and often does equal the planting date.

1	5	1	Number of days from First Water Date to seed stalk emergence (summer conditions):	1	4	7	Salinas (specify comparison variety)
			This Variety				
	1		BOLTING CLASS:	1 = Very Slow	3 = Medium	5 = Very Rapid	
				2 = Slow	4 = Rapid		
1	2	0	Height of mature seed stalk:	1	1	0	cm. Salinas (specify comparison variety)
			cm. This Variety				

3	0	Spread of Bolter Plant (at widest point): cm. This Variety	3	0	cm. <u>Salinas</u>	200000214 <small>(specify comparison variety)</small>
---	---	---	---	---	--------------------	--

2	BOLTER LEAVES:	1 = Straight	2 = Curved
2	MARGIN:	1 = Entire	2 = Dentate
2	COLOR:	1 = Light Green	2 = Medium Green 3 = Dark Green
BOLTER HABIT:			
2	TERMINAL INFLORESCENCE:	1 = Absent	2 = Present
2	LATERAL SHOOTS <small>(above head)</small>	1 = Absent	2 = Present
1	BASAL SIDE SHOOTS	1 = Absent	2 = Present

9. MATURITY (earliness of harvest-mature head formation)
NOTE: Complete this section for at least one season.

SEASON	Applic. 1/# of days			Check 1/# of days	CHECK VARIETY 2/
Spring					
Summer		8	9	9 6	Salinas
Fall					
Winter					

Give planting date(s), and location(s):

Spring	
Summer	03/19/1999, Roelofarendsveen, the Netherlands
Fall	
Winter	

1/ First water date to harvest. 2/ Fill in check variety name on the appropriate line.

10. ADAPTATION:

PRIMARY REGIONS OF ADAPTATION (tested and proven adapted):

(0 = Not tested 1 = Not Adapted 2 = Adapted)

0	Southwest (Calif., Ariz. desert)	0	West Coast	0	Northeast
0	Northcentral	0	Southeast		OTHER _____

SEASON:

2	Spring (area <u>NW Europe</u>)	2	Fall (area <u>NW Europe</u>)
2	Summer (area <u>NW Europe</u>)	1	Winter (area <u>Spain</u>)

1	GREENHOUSE:	0 = Not tested	1 = Not Adapted	2 = Adapted
3	SOIL TYPE:	1 = Mineral	2 = Organic	3 = Both

11. DISEASES AND STRESS REACTIONS (0 = Not tested; 1 = Susceptible; 2 = Intermediate; 3 = Resistant; 4 = Highly resistant; 5 = Tolerant):

VIRUS

0	Big Vein
1	Lettuce Mosaic
5	Cucumber Mosaic
0	Broad Bean Wilt
0	Turnip Mosaic
0	Beet Western Yellows
0	Lett. Infectious Yellows
5	Other Virus Endive Necrotic Mosaic Virus (ENMV)

FUNGAL/BACTERIAL

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1	Corky Root Rot (Pythium Root Rot)
3	Downy Mildew (Races see Exhibit B)
0	Powdery Mildew
0	Sclerotinia Rot
0	Bacterial Soft Rot (Pseudomonas spp. & others)
0	Botrytis (Gray Mold)
	OTHER _____

INSECTS

0	Cabbage Loopers
3	Root Aphids
0	Green Peach Aphid
	Other Insect _____

PHYSIOLOGICAL/STRESS

0	Tip Burn
3	Heat
0	Drought
0	Cold

0	Salt
3	Brown Rib (Rib Discoloration, Rib Blight)
	OTHER _____

POST HARVEST

0	Pink Rib
0	Russet Spotting
0	Rusty Brown Discoloration

0	Internal Rib Necrosis (Blackheart, Gray Rib, Gray Streak)
0	Brown Stain

12. BIOCHEMICAL OR ELECTROPHORETIC MARKERS:

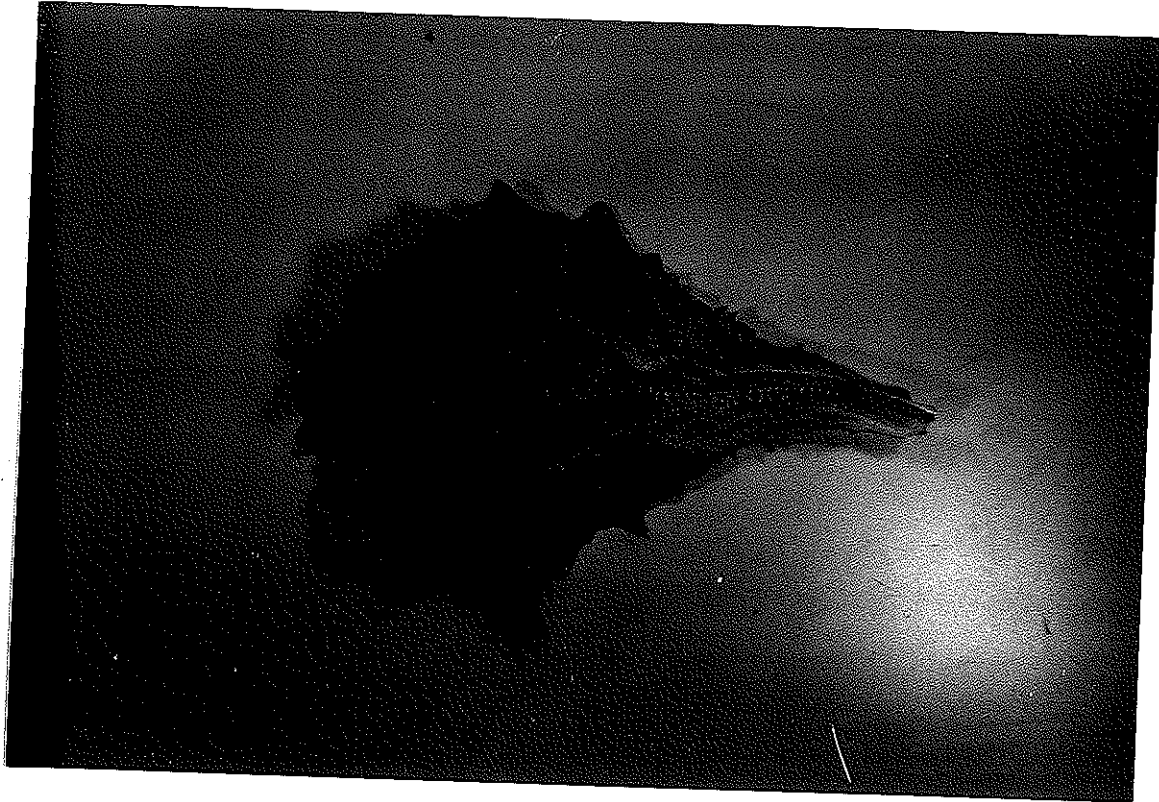
13. COMMENTS:

SUGGESTED CHECK VARIETIES

- | | <u>TYPE</u> |
|-----|-------------------|
| 1) | CUTTING/LEAF |
| 2) | BUTTERHEAD |
| 3) | BIBB |
| 4) | COS, OR ROMAINE |
| 5) | GREAT LAKES GROUP |
| 6) | VANGUARD GROUP |
| 7) | IMPERIAL GROUP |
| 8) | EASTERN GROUP |
| 9) | STEM |
| 10) | LATIN |

- | <u>CHECK VARIETY</u> |
|----------------------|
| SALAD BOWL |
| DARK GREEN BOSTON |
| BIBB |
| PARRIS ISLAND |
| GREAT LAKES 659-700 |
| VANGUARD |
| VIVA |
| ITHACA |
| CEL TUCE |
| MATCHLESS |

200000214



~ADAL' with Lead



~ADAL' Mature leaf

First it should be mentioned that in the original exhibit C the mean data for trial 2 were given.

For light and heat dormancy the remark from my email of December 8, 2004 applies (mail on lettuce appl. 200000018 Fortunas; see below). In addition I would like to ask whether these traits are only relevant to know how to treat the seed samples, or that these dormancy traits are also used to compare PVP-applications.

Anthocyanin concentrations are zero for young and mature leaves, because anthocyanin is absent.

Bl:19 was one of the new European Bremia-strains (Van Ettehoven & Van der Arend, 1999 in: A.Lebeda & E.Kristkova (Eds.) Eucarpia Leafy Vegetables '99. Palacky University, Olomouc, Czech Republic 1999: 171-175). However, it is not available anymore for further testing (Van der Arend et al., 2003 in: Van Hintum et al. (Eds.) Eucarpia Leafy Vegetables 2003. CGN, Wageningen, the Netherlands 2003: 151) and therefore we would like to ask you to disregard the claim for Bl:19-resistance.

remark on dormancy from e-mail December 8, 2004:

'according to our experience, it is very difficult to draw a line between non-dormant and dormant lettuce varieties. Both heat and light dormancy change over time when seed is ageing, and the genetic basis for these traits is polygenic. This means that dormancy is generally measured on a continuous scale.

So my question is where to draw the line: how are light dormancy and heat dormancy defined: which percentage of seeds of which age has to germinate under dark conditions, to state the variety is non-light-dormant? which percentage of seeds of which age has to germinate at which temperature to state that they are non-heat-dormant?'

EXHIBIT D. ADDITIONAL DESCRIPTION OF THE VARIETY

VARIETY: ADAL

Adal is a crisp lettuce with root aphid resistance. It makes very well shaped heads and is very resistant against internal tipburn and rib blight. Adal is slow bolting. Adal is resistant to the official Bremia races NL1, NL2, NL4, NL5, NL6, NL13, NL14, NL15, BI-17 and BI-19 (Europe) and susceptible to the Californian pathotypes Ca I-Ca V. Adal is tolerant against CMV.

Adal can be used in plantings from Spring until Fall. Adal is tolerant for hot conditions

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) Rijk Zwaan Zaadteelt en Zaadhandel B.V.	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME ADAL
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) Burgemeester Crezeelaan 40 2678 KX DE LIER, The Netherlands	5. TELEPHONE (include area code) + 31 174 532300	6. FAX (include area code) + 31 174 513730
7. PVPO NUMBER 200000214		

8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain.

☒ YES ☐ NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company?

If no, give name of country Netherlands

☐ YES ☒ NO

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5/27/05

10. Is the applicant the original breeder? If no, please answer the following:

☒ YES ☐ NO

a. If original rights to variety were owned by individual(s):

Is (are) the original breeder(s) a U.S. national(s)? If no, give name of country _____

☐ YES ☐ NO

b. If original rights to variety were owned by a company:

Is the original breeder(s) U.S. based company? If no, give name of country _____

11. Additional explanation on ownership (If needed, use reverse for extra space):

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original breeder, both the original breeder and the applicant must meet one of the above criteria.

The original breeder may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

Public reporting burden for this collection of information is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Officer, OIRM, AG Box 7630, Jamie L. Whitten Building, Washington, D.C. 20250. When replying, refer to OMB No. 0581-0055 and form number in your letter.

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